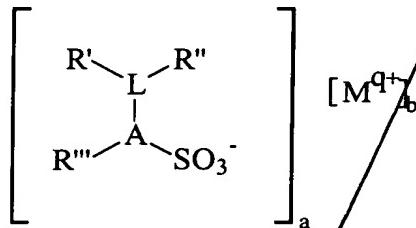


1. A surfactant composition comprising:

alkylarylsulfonate surfactant system comprising at least two isomers of the alkylarylsulfonate surfactant of the formula:



5 wherein:

L is an acyclic aliphatic hydrocarbyl of from 6 to 18 carbon atoms in total;

M is a cation or cation mixture and q is the valence thereof;

a and b are numbers selected such that said composition is electroneutral;

R' is selected from H and C₁ to C₃ alkyl;

10 R'' is selected from H and C₁ to C₃ alkyl;

R''' is selected from H and C₁ to C₃ alkyl;

both R' and R'' are nonterminally attached to L and at least one of R' and R''

is C₁ to C₃ alkyl; and

A is aryl; and

15 wherein:

said alkylarylsulfonate surfactant system comprises two or more isomers with respect to positions of attachment of R', R'' and A to L;

in at least 60% of said alkylarylsulfonate surfactant system, A is attached to L in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof; and

20 wherein further said alkylarylsulfonate surfactant system has at least one of the following properties:

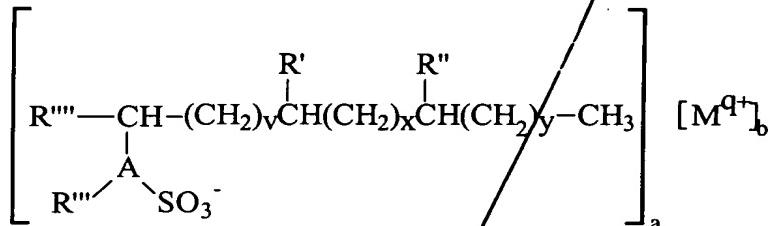
25 said alkylarylsulfonate surfactant system has a ratio of nonquaternary to quaternary carbon atoms in L of at least 10:1 by weight, when said quaternary carbon atoms are present; and

there is no more than 40% by weight loss as measured by Hardness Tolerance Test.

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2. A surfactant composition comprising:

alkylarylsulfonate surfactant system comprising at least two isomers, counted exclusive of ortho-, meta-, para-, and stereoisomers, of an alkylarylsulfonate surfactant of the formula:



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wherein M is a cation, q is the valence of said cation, a and b are numbers selected such that said composition is electroneutral; A is aryl; R''' is selected from H and C₁ to C₃ alkyl; R' is selected from hydrogen and C₁ to C₃ alkyl; R'' is selected from hydrogen and C₁ to C₃ alkyl; and R''' is selected from hydrogen and C₁ to C₄ alkyl;

10 v is an integer from 0 to 10; x is an integer from 0 to 10; y is an integer from 0 to 10; wherein:

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the total number of carbon atoms attached to A is less than 20;

said alkylarylsulfonate surfactant system comprises two or more isomers with respect to positions of attachment of R', R'' and A to the moiety

20

R'''-C(-)H(CH₂)_vC(-)H(CH₂)_xC(-)H(CH₂)_y-CH₃ of this formula; at least one of R' and R'' is C₁ to C₃ alkyl; when R''' is C₁, the sum of v + x + y is at least 1; and when R''' is H, the sum of v + x + y is at least 2; and in at least 60% of said alkylarylsulfonate surfactant system, A is attached to the moiety

25

R'''-C(-)H(CH₂)_vC(-)H(CH₂)_xC(-)H(CH₂)_y-CH₃ in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof;

wherein further said alkylarylsulfonate surfactant system has at least one of the following properties:

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said alkylarylsulfonate surfactant system has a ratio of nonquaternary to quaternary carbon atoms in the moiety

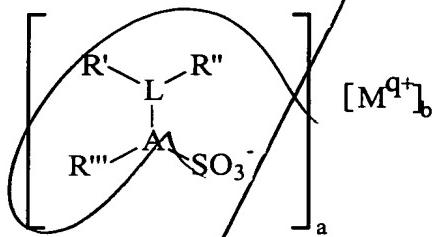
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$R'''-C(-)H(CH_2)_vC(-)H(CH_2)_xC(-)H(CH_2)_y-CH_3$ of at least 10:1 by weight, when said quaternary carbon atoms are present; and there is no more than 40% by weight loss as measured by Hardness Tolerance Test.

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3. A surfactant composition comprising:

- a) from 0.01% to 99.99% by weight of an alkylarylsulfonate surfactant system comprising at least two isomers of the alkylarylsulfonate surfactant of the formula:



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wherein:

L is an acyclic aliphatic hydrocarbyl of from 6 to 18 carbon atoms in total;

M is a cation or cation mixture and q is the valence thereof;

a and b are numbers selected such that said composition is electroneutral;

15

R' is selected from H and C₁ to C₃ alkyl;

R'' is selected from H and C₁ to C₃ alkyl;

R''' is selected from H and C₁ to C₃ alkyl;

both R' and R'' are nonterminally attached to said L and at least one of R' and

R'' is C₁ to C₃ alkyl; and

20

A is aryl; and

wherein:

said alkylarylsulfonate surfactant system comprises two or more isomers with respect to positions of attachment of R', R'' and A to L;

25

in at least 60% of said alkylarylsulfonate surfactant system, A is attached to L in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof; and

wherein further said alkylarylsulfonate surfactant system has at least one of the following properties:

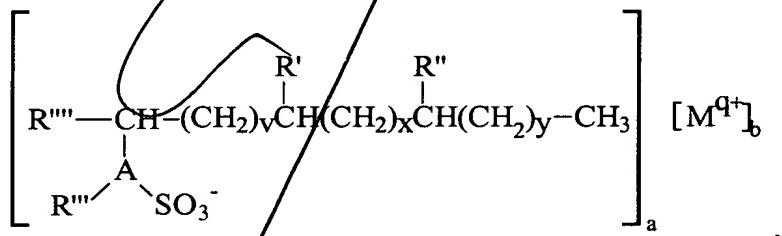
said alkylarylsulfonate surfactant system has a ratio of nonquaternary to quaternary carbon atoms in L of at least 10:1 by weight, when said quaternary carbon atoms are present; and

5 there is no more than 40% by weight loss as measured by Hardness Tolerance Test; and

b) from 0.01% to 99.99% by weight of at least one isomer of the linear analog of said alkylarylsulfonate surfactant (a).

4. A surfactant composition comprising:

10 a) from 0.01% to 99.99% by weight of an alkylarylsulfonate surfactant system comprising at least two isomers, counted exclusive of ortho-, meta-, para- and stereoisomers, of an alkylarylsulfonate surfactant of the formula:



wherein M is a cation, q is the valence of said cation, a and b are numbers selected 15 such that said composition is electroneutral; A is aryl; R'' is selected from H and C₁ to C₃ alkyl; R' is selected from hydrogen and C₁ to C₃ alkyl; R'' is selected from hydrogen and C₁ to C₃ alkyl; and R''' is selected from hydrogen and C₁ to C₄ alkyl; v is an integer from 0 to 10; x is an integer from 0 to 10; y is an integer from 0 to 10; wherein:

20 the total number of carbon atoms attached to A is less than 20;

said alkylarylsulfonate surfactant system comprises two or more isomers with respect to positions of attachment of R', R'' and A to the moiety

R'''-C(-)H(CH₂)_vC(-)H(CH₂)_xC(-)H(CH₂)_y-CH₃ of this formula;

25 at least one of R' and R'' is C₁ to C₃ alkyl; when R''' is C₁, the sum of v + x + y is at least 1; and when R''' is H, the sum of v + x + y is at least 2; and in at least 60% of said alkylarylsulfonate surfactant system, A is attached to the moiety

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$R'''-C(-)H(CH_2)_vC(-)H(CH_2)_xC(-)H(CH_2)_y-CH_3$ in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof; and

wherein further said alkylarylsulfonate surfactant system has at least one of the
5 following properties:

said alkylarylsulfonate surfactant system has a ratio of nonquaternary to quaternary carbon atoms in the moiety

$R'''-C(-)H(CH_2)_vC(-)H(CH_2)_xC(-)H(CH_2)_y-CH_3$ of at least 10:1 by weight, when said quaternary carbon atoms are present; and

10 there is no more than 40% by weight loss as measured by Hardness
Tolerance Test; and

b) from 0.01% to 99.99% by weight of at least one isomer of the linear analog of said alkylarylsulfonate surfactant (A).

15 5. A surfactant composition according to any one of Claims 1-4 wherein A is selected from the group consisting of:

- i) benzene;
 - ii) toluene;
 - iii) xylene;
 - iv) naphthalene; and
 - v) mixtures thereof.

6. A surfactant composition according to any one of Claims 1-5 wherein A is benzene.

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7. A surfactant composition according to any one of Claims 1-6 wherein one of R' and R" is methyl or ethyl

8. A surfactant composition according to any one of Claims 1-7 wherein one of
R' and R" is methyl.

9. A cleaning composition comprising

- i) from 0.01% to 99.99% by weight of a surfactant composition according to any one of Claims 1-9; and
- ii) from 0.0001% to 99.99% by weight of a cleaning additive.

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